



Chinook Salmon

Oncorhynchus tshawytscha

STATUS

Threatened (58 FR 49880, September 23, 1993)

Critical Habitat designated (59 FR 54840, November 2, 1994)

The National Marine Fisheries Service (NMFS) is the lead federal agency for anadromous fish, including chinook salmon.

DESCRIPTION

The chinook ("King") salmon is the largest species of Pacific salmon, currently average 18 to 24 pounds. Some adults can reach 40 inches and weigh over 50 pounds. Chinook have small black spots on the back and dorsal and tail fins. Chinook are "anadromous" fish — fish that spawn, hatch and rear in fresh water, migrate to the ocean, return to their natal waters one to four years later to spawn, and then die.

Idaho has three runs of chinook: called spring, summer and fall, based on the time of arrival in Idaho waters. NMFS has combined spring and summer chinook into one "species" called Snake River spring/summer chinook salmon. Fall chinook remains a separate "species." After arriving in the Clearwater, Salmon and Snake rivers, chinook salmon spawn in late summer or autumn, in sites that have the best combination of gravel and coarse sand, adequate depth, and good water flow to provide oxygen for eggs. Depending on water temperature, egg incubation varies from 80 to 140 days. The alevins, or sac-fry, spend the winter buried in the gravel, living on energy stored in the egg yolk which remains attached to their abdomen. Fully-formed fry swim up from gravel nests in early spring. The young salmon, called "smolts," migrate to the ocean after six months to a year. After one to four years in the ocean, the fish begin their journey upstream back to natal waters to spawn and start the cycle over again.

HISTORY

Chinook salmon were abundant at one time in Idaho, as well as in most of the larger river systems in the northern half of the Pacific coast. Since 1958, the Hells Canyon Dam Complex has blocked the middle Snake River and its tributaries from migration. After the Lower Snake River Dams were completed in 1975, Chinook numbers declined even further. By 1990, only 576 fall chinook were counted crossing Lower Granite Dam, and in 1999 just 3,500 spring chinook returned.

DISTRIBUTION

Spring chinook return to the Upper Salmon River in the Sawtooth Mountains, and the Middle Fork, East Fork and Yankee Fork of the Salmon River. Summer chinook return to the South Fork of the Salmon River and the Salmon River. Chinook salmon were blocked from access to the Clearwater River by a dam near Lewiston, Idaho, from 1923 to 1973. Since the Lewiston Dam's removal, spring and fall chinook are being reintroduced to the Clearwater River system.

WHAT HAS THREATENED THIS SPECIES?

It has been estimated that 55 to 90 percent of migrating smolts do not make it downstream due to hydropower facilities— which may create weak water currents, warm waters, blocked migratory routes and dangerous turbines. Habitat loss and degradation; agricultural, urban and industrial pollution; mistaken angler harvest; clearcutting, removal of streamside vegetation and livestock use; and some hatchery practices also pose threats to the chinook salmon.

WHAT IS BEING DONE TO HELP RECOVER THIS SPECIES?

Efforts are underway to conserve and enhance natural Chinook salmon populations by improving seaward migration survival, restoring habitat, reducing harvest and modifying hatchery operations.

REFERENCES

National Marine Fisheries Service. 1992.

